UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Communications and Information
Washington, D.C. 20230

January 23, 1989

Honorable Dennis R. Patrick
Chairman
Federal Communications Commission
Washington, D.C. 20554

RE: MM Doc. No. 87-268

Dear Chairman Patrick:

As you are well aware, high definition or advanced television (ATV) and related technologies and products are some of the most important developments in recent years. The Commission and its Advisory Committee on Advanced Television Services have been working diligently to bring ATV to the public. Likewise, the Executive Branch has been working to ensure opportunities for significant United States participation in ATV and related fields. I would like to take this opportunity to bring the Commission, and the parties to this proceeding, up to date on the activities of the Department of Commerce in this area.

The potential opportunities associated with participation in ATV go far beyond traditional television sets. ATV developments will also affect such key industries as computers and semiconductors, as well as many other fields which use visual imaging, such as medical diagnostics, factory automation, printing and video program production. The technologies involved will be important to the future growth and competitiveness of both companies and their countries.

The Department of Commerce has been actively involved in a number of efforts related to potential U.S. industry participation in ATV. In this regard, we have established the Secretary of Commerce's Advisory Committee on Advanced Television, which is looking into means to encourage a significant United States presence in ATV. The Advisory Committee members include a diverse group of corporate Chief Executives representing various industries which may be significantly impacted by ATV -- including consumer electronics, semiconductors, program production, mass media, and finance. There is also a representative from academia, and four ex officio members representing Federal Government agencies which are actively involved in advanced technology and its applications, including the Chairman of your Advisory Committee on Advanced Television Services.

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The Secretary's Advisory Committee has met twice already and has made significant progress in defining the impact of ATV on the competitiveness of U.S. industry and other national interest concerns. The January 1989 "Report of the Advisory Committee on Advanced Television to the Secretary of Commerce," which summarizes the Committee's findings and recommendations to date, is attached.

NTIA's technical laboratory, the Institute for Telecommunication Sciences (ITS), participated in a study of how many current television stations could be assigned supplementary bandwidths for ATV broadcasts. Using an ITS-developed computer program, we helped calculate optimum assignments of additional bandwidths and provided the results to the Commission's Advisory Committee. Using the same software, ITS is currently undertaking a number of trade-off studies concerning the UHF taboos. ITS is also planning to conduct propagation studies with particular emphasis given to those propagation effects related to adjacent channel interference.

NTIA has also recently published a Notice of Inquiry in the Federal Register asking for public comment on issues related to adoption of an HDTV production standard (53 Fed. Reg. 51296, Dec. 21, 1988). The U.S. Government supported the adoption of an 1125/60 standard as a worldwide HDTV production standard at the May 1986 Plenary Assembly of the International Radio Consultative Committee (CCIR). This position was based on strong support from U.S. industry for the 1125/60 standard as a single, worldwide HDTV production standard. The opposition of other governments to this standard, however, has called into question the likelihood that there will be a single, worldwide standard. In addition, while the 1125/60 standard was the only one that had been proposed before the 1986 CCIR meeting, there are now other proposed production standards, including one developed in the United States.

In light of these changed circumstances, NTIA has sought comment on such questions as the implications of multiple video production standards, the merits of other HDTV production standards under development, whether the U.S. Government should continue to support a production standard or standards, the criteria that should be used in deciding to support a production standard, and the relationship between production standards and the equipment producers attempting to serve end user markets. We intend to use the record developed from the Notice to assess the U.S. Government position for the 1990 CCIR meeting, which will again address the adoption of a single, worldwide HDTV production standard. Comments may be filed with our Office of the Chief Counsel until March 1, 1988.

Through these and other efforts the Department of Commerce is working with private industry to help make ATV a reality in the United States and to ensure opportunities exist for significant U.S. industry participation in ATV and related technologies. We wholeheartedly support the efforts of the Commission and its Advisory Committee in the development of a transmission standard for terrestrial broadcasting of ATV and NTIA will continue to work with the Commission in these efforts. It will take such cooperative efforts to bring ATV to fruition in the overall best interests of the United States.

Sincerely,

Alfred C. Sikes

Attachments

cc: James H. Quello, Commissioner
Patricia Diaz Dennis, Commissioner
Donna R. Searcy, Secretary

REPORT

OF THE

ADVISORY COMMITTEE ON ADVANCED TELEVISION

TO THE

SECRETARY OF COMMERCE

January 1989

The Advisory Committee on Advanced Television ("Advisory Committee" or "Committee") was chartered on November 2, 1988. The Advisory Committee currently has nine members. Eight of the members are representatives of various industries which may be significantly impacted by advanced television (ATV)--including consumer electronics, semiconductors, program production, broadcasting, and finance. One member represents academia. There are also four ex officio members representing Federal Government agencies which are actively involved in advanced technology and its applications, including the Chairman of the Federal Communications Commission's Advisory Committee on Advanced Television Services.

The Committee, as required in its charter, met twice in 1988, on November 17th and December 15th. While the Committee members are in substantial agreement on a number of points regarding the impact of ATV on the competitiveness of U.S. industry and other national interest concerns, there are many issues which warrant further work and discussion by the Committee. This report summarizes the findings and recommendations of the Advisory Committee to date.

The issues surrounding the development of advanced television technologies present serious problems for the United States. There is only a small and dwindling industrial base in consumer electronics production in the

U.S. The most dramatic example of this problem is in the television set industry, where Zenith is now the only major television manufacturer that is still U.S.-owned. If U.S. industry does not participate significantly in ATV, this situation will be exacerbated, and the U.S. will grow even more dependent on foreign-owned sources for consumer electronics.

The potential problems associated with a lack of significant U.S. participation in ATV go far beyond traditional television sets. ATV sets will be heavily dependent on semiconductors. With the projected aggregate sales of ATV sets, their production will create a large demand for semiconductors. If U.S. semiconductor manufacturers do not have significant access to this market, they will be severely disadvantaged relative to their vertically integrated competitors. Besides the semiconductor manufacturers, it will also affect the upstream feed technologies and their respective industries -- materials manufacturers, instrument and equipment manufacturers. Likewise, ATV development and production will also impact dramatically the computer industry, as the two industries increasingly rely on similar technology. ATV will also affect many other fields and industries which use visual imaging, such as medicine, printing, and video program production, as well as many national security applications.

These technologies, in sum, are critical to the future growth and competitiveness of the nation.

There are several factors which have led to the decline of U.S. competitiveness in consumer electronics. One important factor is the lower cost of capital for many foreign companies. Foreign companies have also been given certain advantages over U.S. companies in terms of access to markets. The United States, the largest market for consumer electronics, is generally an open market in which all companies may sell their products. Other countries, however, have not allowed U.S. products to enter their markets as freely. This has allowed foreign companies to have a sanctuary from competition with U.S. companies. The result is that these companies were effectively able to sell their consumer electronics at cost or below, particularly television sets, in the United States. These practices were a factor in most U.S. companies getting out of the consumer electronics industry.

The United States is currently behind in research related to advanced television. The Japanese have been working on ATV for almost two decades, and the Europeans have a concentrated effort in this area through their Eureka program. American efforts, on the other hand, have been comprised mostly of several small-scale independent

operations. Foreign efforts have been well funded, while U.S. research has been struggling to attain adequate funding. In spite of this, U.S. research has produced some significant developments recently.

The time lag in establishing standards for ATV has given U.S. industry a window of opportunity to become involved in manufacturing ATV products. For example, the Federal Communications Commission is in the process of establishing a transmission standard for terrestrial broadcasts of ATV in the United States. Since this process will require field testing the numerous ATV transmission proposals, it is likely that a transmission standard will not be adopted for two to three years. During this time, U.S. companies may be able to gain ground relative to off-shore competitors.

In regard to a production standard for ATV, U.S. industry and the U.S. Government have supported the adoption of a single, worldwide ATV production standard to ease the transfer of ATV programming between nations. Despite our support for an 1125 line, 60 field per second (1125/60) standard for the production of ATV programming, it now appears unlikely that there will be a single, worldwide standard. In light of changing circumstances, the Advisory Committee supports the Department of Commerce issuance of a Notice On Inquiry with respect to the U.S. position on

adoption of a production standard. Some members of the Committee suggested that the U.S. should reverse its position on this matter.

It will take cooperative efforts between private industry and the government to ensure effective U.S. participation in ATV. The nature and extent of such efforts is still under consideration by the Advisory Committee. Some members of the Committee have stressed that this Report should even more strongly characterize the issues and further emphasize the urgency of a concerted effort to respond to the international challenge we face on the ATV issue. Considering the importance of ATV, and its effects on related industries, it is vital that the U.S. participate significantly in ATV.